

We claim:

1. A vascular insertion assembly, comprising:
an insertion sheath;
a dilator;
the insertion sheath having an inside diameter and comprising a sheath distal end and a sheath proximate end;
the dilator sized to fit in the inside diameter of the insertion sheath comprising a dilator distal end and a dilator proximate end;
a first inlet port located about the sheath distal end;
a first indicator; and
the first indicator coupled with the first inlet port, such that when the first inlet port penetrates a vessel the first indicator provides indication.
2. The assembly according to claim 1, further comprising:
a second inlet port located about the dilator distal end;
a second indicator; and
the second indicator coupled with the second inlet port, such that when the second inlet port penetrates a vessel the second indicator provides indication.
3. The assembly according to claim 1, wherein the first inlet port comprises a plurality of inlet ports.
4. The assembly according to claim 3, wherein the plurality of inlet ports are offset to accommodate an insertion angle of the assembly.

5. The assembly according to claim 2, further comprising:
at least a third inlet port;
at least a third indicator; and
at least the third indicator coupled with at least the third inlet port, such that
when at least the third inlet port penetrates a vessel at least the third indicator
provides indication.

6. The assembly according to claim 2, wherein the second inlet port and
the second indicator provide indication of an initial penetration of the insertion
sheath to the vessel.

7. The assembly according to claim 2, wherein the first inlet port and the
first indicator provide indication of too far penetration of the insertion sheath to the
vessel.

8. The assembly according to claim 2, wherein the first inlet port and the
first indicator provide indication of proper penetration of the insertion sheath to the
vessel.

9. The assembly according to claim 1, wherein the first inlet port and the
first indicator provide indication of too far penetration of the insertion sheath to the
vessel.

10. The assembly according to claim 1, wherein the first inlet port and the first indicator provide indication of proper penetration of the insertion sheath to the vessel.

11. The assembly according to claim 1, wherein the first inlet port and the first indicator provide indication of initial penetration of the insertion sheath to the vessel.

12. The assembly according to claim 5, wherein:
the second inlet port and the second indicator provide indication of an initial penetration of the insertion sheath to the vessel;
the first inlet port and the first indicator provide indication of proper penetration of the insertion sheath to the vessel; and
at least the third inlet port and at least the third indicator provide indication of too far penetration of the insertion sheath to the vessel.

13. The assembly according to claim 1, wherein the first indicator is a first drip hole in fluid communication with the first inlet port.

14. The assembly according to claim 13, further comprising:
a first lumen providing the fluid communication between the first drip hole and the first inlet port.

15. The assembly according to claim 13, wherein the first lumen is located in the dilator.

16. The assembly according to claim 13, wherein the first lumen is located in a wall of the insertion sheath.

17. The assembly according to claim 2, wherein the first indicator is a first drip hole in fluid communication with the first inlet port and the second indicator is a second drip hole in fluid communication with the second inlet port.

18. The assembly according to claim 17, further comprising:
a first lumen provides the fluid communication between the first drip hole and the first inlet port; and
a second lumen provides the fluid communication between the second drip hole and the second inlet port.

19. The assembly according to claim 18, wherein at least one of the first lumen and the second lumen is located in the dilator.

20. The assembly according to claim 18, wherein at least one of the first lumen and the second lumen is located in a wall of the insertion sheath.

21. The assembly according to claim 17, further comprising:
a lumen;
the lumen comprises a first flow path and a second flow path, wherein
the first flow path provides the fluid communication between the first drip
hole and the first inlet port; and
a second flow path provides the fluid communication between the second drip
hole and the second inlet port.

22. The assembly according to claim 1, wherein the first indicator is a
gauge.

23. The assembly according to claim 22, wherein the gauge is a pressure
gauge.

24. The assembly according to claim 22, further comprising:
a second inlet port located about the dilator distal end; wherein
the gauge is a differential pressure gauge and the first inlet port is coupled to
a first input port of the differential pressure gauge and the second inlet port is
coupled to a second input port of the differential pressure gauge, such that the
differential pressure gauge indicates when the second inlet port and the first inlet
port penetrate the vessel.

25. The assembly according to claim 24, wherein the differential pressure
gauge is a ball, float gauge.

26. The assembly according to claim 24, wherein the differential pressure gauge contains a faceplate.

27. The assembly according to claim 26, wherein the faceplate provide penetration information.

28. A vascular insertion assembly, comprising:
an insertion sheath having a sheath distal end and a sheath proximate end;
a dilator having a dilator distal end and a dilator proximate end;
the dilator sized to fit in the insertion sheath;
a first inlet port located about the dilator distal end;
a second inlet port located about the sheath distal end;
a first drip hole in fluid communication with the first inlet port; and
a second drip hole in fluid communication with the second inlet port, wherein fluid flows out the first drip hole when the first inlet port penetrates a vessel and fluid flows out the second drip hole when the second inlet port penetrates the vessel.

29. The assembly according to claim 28, wherein fluid communication is provided via at least one lumen.

30. The assembly according to claim 28, wherein the first inlet port comprises a plurality of first inlet ports.

31. The assembly according to claim 30, wherein the plurality of first inlet ports are staggered.

32. The assembly according to claim 28, wherein the second inlet port comprises a plurality of second inlet ports.

33. The assembly according to claim 30, wherein the second inlet port comprises a plurality of second inlet ports.

34. The assembly according to claim 33, wherein at least one of the plurality of first inlet port and the plurality of second inlet ports are staggered.

35. The assembly according to claim 28, further comprising:
a penetration gauge;
the penetration gauge comprising an indicator, a first access port, and a second access port;
the first access port in fluid communication with the first drip hole and the second access port in fluid communication with the second drip hole, such that the indicator provides indication of when the first inlet port and the second inlet port penetrate the vessel.

36. The assembly according to claim 28, further comprising:
a penetration gauge;
the penetration gauge comprising an indicator, a first fluid sensor, and a second fluid sensor;
the first fluid sensor adapted to generate a first signal when the first inlet port penetrates the vessel and the second fluid sensor adapted to generate a second signal when the second inlet port penetrates the vessel.

37. The assembly according to claim 28, wherein the first inlet port and first drip hole provide initial penetration indication of the vessel.

38. The assembly according to claim 28, wherein the second inlet port and second drip hole provide too far penetration indication of the vessel.

39. The assembly according to claim 28, further comprising:
at least a third inlet port; and
at least a third drip hole, such that at least the third inlet port and at least the third drip hole provide additional penetration information.

40. A vascular insertion assembly, comprising:
an insertion sheath having a sheath distal end and a sheath proximate end;
a dilator having a dilator distal end and a dilator proximate end;
the insertion sheath having an inside diameter
the dilator having an outside diameter such that the dilator fits snugly inside
the insertion sheath; and
means for providing penetration information located about the insertion
sheath.

41. The assembly according to claim 40, wherein the means for providing
penetration information comprises at least a first inlet port in fluid communication
with at least a first drip hole.

42. The assembly according to claim 41, wherein fluid communication is
provided by at least one lumen residing in a wall of the insertion sheath.

43. The assembly according to claim 40, wherein the means for providing
penetration information comprises at least a first fluid sensor electronically coupled
to at least a first indicator.

44. The assembly according to claim 40, wherein the means for providing
penetration information comprises at least a first inlet port in the dilator distal end
and a second inlet port in the sheath distal end.